

February 6, 2006
1420 East 6th Ave.
P.O. Box 200701
Helena, MT 59620-0701

Environmental Quality Council
Montana Department of Environmental Quality
Montana Department of Fish, Wildlife and Parks
Fisheries Division
Endangered Species Coordinator
Bozeman Office

Montana State Library, Helena

MT Environmental Information Center

Montana Audubon Council

Park Conservation District, 5242 Highway 89 South, Livingston, MT 59047

Natural Resource and Conservation Service, 5242 Highway 89 South, Livingston, MT 59047

U.S. Army Corp of Engineers, Helena

U.S. Fish and Wildlife Service, Helena

State Historic Preservation Office, Helena

Joe Brooks Chapter Trout Unlimited, 271 Old Clyde Park Road, Livingston, MT 59047

Upper Yellowstone Watershed Basin, 108 1/2 W. Callender St., Ste. 4-5, Livingston, MT 59047-0148

Ladies and Gentlemen:

Please find enclosed an Environmental Assessment (EA) prepared for the Future Fisheries Improvement Program. The Program tentatively plans to provide partial funding to modify three irrigation systems to prevent entrainment of and provide fish passage for Yellowstone cutthroat trout. These proposed projects are located on three tributaries of the Yellowstone River: South Fork Fridley Creek, Big Creek, and Mol Heron Creek in Park County.

Please submit any comments that you have by 5:00 P.M., March 7, 2006 to the Department of Fish, Wildlife and Parks in Helena at the address listed above. This project has been granted approval by the Fish, Wildlife and Parks Commission. If you have any questions, feel free to contact me at (406) 222-3710. Please note that this draft EA will be considered as final if no substantive comments are received by the deadline listed above.

Sincerely,

Patrick Byorth
Yellowstone Cutthroat Restoration Biologist
Livingston Fisheries Office
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Livingston, MT 59047
e-mail: pbyorth@mt.gov

ENVIRONMENTAL ASSESSMENT
Fisheries Division
Montana Fish, Wildlife and Parks
Yellowstone Cutthroat Entrainment Prevention Project

General Purpose: The 1995 Montana Legislature enacted statute 87-1-272 through 273 that directs the Department to administer a Future Fisheries Improvement Program. The program involves providing funding for physical projects to restore degraded fish habitat in rivers and lakes for the purpose of improving wild fisheries. The legislature established an earmarked funding account to help accomplish this goal. Additionally, the 1999 Montana Legislature amended statute sections 87-1-273, 15-38-202 and Section 5, Chapter 463, Laws of 1995 to create a bull trout and cutthroat trout enhancement program. The program calls for the enhancement of bull trout and cutthroat trout through habitat restoration, natural reproduction and reductions in species competition by way of the Future Fisheries Program.

The Future Fisheries Improvement Program (FFIP) is proposing to provide partial funding to modify three irrigation structures to prevent loss of spawning Yellowstone cutthroat trout and other fishes into irrigation canals and provide passage past the diversion. In the South Fork of Fridley Creek, a failing diversion structure will be replaced with a similar structure including a Denil fish ladder. An undershot, rotating drum screen will be installed in the Mutual Ditch on Big Creek with a bypass pipeline leading back to the stream. On Mol Heron Creek, an existing infiltration gallery and pipeline will be modified to house an undershot rotating drum screen. The intent of the project is to enhance survival of spawning and young Yellowstone cutthroat trout (a species of special concern in Montana).

I. Location of Project: This projects are located on these tributaries of the Yellowstone River in Park County, Montana: South Fork of Fridley Creek (T6S R8E Sec 4 NWSW), Big Creek (T6S R7E Sec.22 NWNW), and Mol Heron Creek (T8S R7E Sec. 24 NESW). Please refer to Attachment A, a map of the project locations.

II. Need for the Project: One goal within Montana Fish, Wildlife and Parks six-year operations plan for the fisheries program is to “restore and enhance degraded fisheries habitats” by implementing habitat restoration projects and administering the Future Fisheries Improvement Program to restore important habitats on private and public lands. This proposed project would help meet this goal.

Montana Fish, Wildlife, and Parks (FWP) identified irrigation systems as a primary factor limiting reproduction of Yellowstone cutthroat trout (YCT) (designated a Species of Special Concern) through dewatering spawning tributaries of the upper Yellowstone River and entrainment losses of spawners and fry into diversion ditches. Water leasing and conservation has improved stream flows and YCT reproduction, but fish continue to be lost in irrigation systems. FWP’s Landowner Incentive Program\Yellowstone Cutthroat Restoration Project has enlisted the assistance of a set of landowners and irrigators to address this issue. The purpose of this proposal is to design and install modifications to diversion systems that will prevent loss of fry and spawners and facilitate fish passage around diversion structures.

III. Scope of the Project:

During 2004, FWP assessed irrigation systems on four tributaries of the Upper Yellowstone River and documented entrainment of YCT and passage barriers. Past studies have documented loss of spawning YCT to these diversion systems. Each project presents unique challenges:

South Fork Fridley Creek: The Story Diversion was installed on the South Fork of Fridley Creek in the early 1970's and is in need of replacement. During the irrigation season – which coincides with YCT spawning – splashboards are installed to divert water into the Story ditch. The splashboards prevent most spawners from accessing spawning habitat. This project entails reconstructing a diversion structure with a Denil fish ladder that will facilitate fish passage during the irrigation season (Attachment B).

Big Creek: Yellowstone cutthroat trout have benefited from FFIP projects and a water lease that have maintained minimum flows in Big Creek since the mid 1990's. Redd counts have tripled since the lease has been in effect. However, telemetry studies and recent fry trapping documented entrainment of YCT spawners and fry into the Mutual Ditch. The ditch is large (12cfs) and known to entrain both spawners and fry. We propose to install an undershot rotating drum screen, which will minimize entrainment and return fish back into the stream through a bypass. The installation of the bypass pipeline and outlet will create a minor disturbance of the streambed and riparian vegetation, while the majority of disturbance will be within the dry irrigation canal (Attachment C).

Mol Heron Creek: In conjunction with a water lease, an infiltration gallery was installed with FFIP dollars to conserve water and prevent entrainment in Mol Heron Creek. The water lease has maintained excellent flows in the stream throughout the summer. Unfortunately, the infiltration gallery was rendered ineffective due to sedimentation and was altered to maintain access to water rights, which opened the system to entrainment. We propose to disconnect the infiltration gallery (to leave it in place), replace the existing standpipe to house an undershot rotating drum screen, and patch the pipeline to minimize entrainment while maintaining access to legal water rights (Attachment D).

This project is expected to cost \$ 98,012. Of this total, the Future Fisheries Improvement Program would be contributing up to \$ 50,937.

IV. Environmental Impact Checklist:

Please see attached checklist.

V. Explanation of Impacts to the Physical Environment

1. Terrestrial and aquatic life and habitats.

Installation of the various structures will cause a short-term disruption in terrestrial and aquatic habitats. On Big Creek, riparian vegetation will be disturbed during the installation of a bypass pipe from the screen to the stream. No streamside terrestrial vegetation will be disturbed in the other two projects. In each project, installation of the structures will cause a localized, temporary disturbance to the stream bed.

2. Water quantity, quality and distribution.

Water quality will be temporarily disturbed during installation of the structures. In Big Creek, the disturbance will be limited to less than a full day as the bypass pipe is installed. In Mol Heron Creek, much of the work will be conducted above the water line, but a small amount of turbidity will be produced over a few day period. Replacing the irrigation diversion in the South Fork of Fridley Creek will necessitate a short-term diversion of the stream around the work area while the new structure is installed. This process will cause short-term turbidity periodically over an estimated 4 to 5 day period.

3. Vegetation cover, quantity and quality.

Riparian vegetation will be disturbed only at the Big Creek site during the installation of a bypass pipe. Woody vegetation will be salvaged and replanted as feasible, and disturbed areas will be reseeded to minimize the spread of noxious weeds.

4. Unique, endangered, fragile or limited environmental resources.

The Yellowstone cutthroat trout is classified as a “Species of Special Concern” in Montana due to their limited numbers and shrinking distribution. This project is expected to enhance survival and spawning success for Yellowstone cutthroat trout and thereby increase recruitment to the Yellowstone River.

VI. Explanation of Impacts on the Human Environment.

1. Agricultural and Industrial Production.

The modifications of the irrigation structures were designed to provide full access to water to which irrigators are entitled. However, unforeseen circumstances may temporarily interrupt ditch flow. In the first irrigation season in operation, FWP will assist irrigators in operation and maintaining the structures to ensure they operate properly and provide adequate irrigation flows.

VII. Discussion and Evaluation of Reasonable Alternatives.

1. No Action Alternative

If no action is taken, existing irrigation systems will be used as before and Yellowstone cutthroat trout and other fishes will continue to be lost into the systems.

2. The Proposed Alternative

The proposed alternative is designed to ensure that Yellowstone cutthroat trout and other fishes will be able to pass these irrigation systems unharmed. A fish ladder on the South Fork of Fridley Creek will allow fish to pass the diversion. Two rotating drum screens installed in Mol Heron and Big creeks will prevent fish from being entrained into irrigation ditches. The proposed alternative

will decrease mortality of Yellowstone cutthroat trout and could be expected to improve populations in the Yellowstone River.

VIII. Environmental Assessment Conclusion Section

1. Is an EIS required? No.

We conclude from this review that the proposed activities will have a positive impact on the physical and human environment.

2. Level of public involvement.

The proposed project was reviewed and supported by the public review panel of the Future Fisheries Improvement Program. The proposed project was also reviewed and approved by the Fish, Wildlife and Parks Commission. Park County Conservation District co-sponsored the project and funded designs through a DNRC 223 grant. The Upper Yellowstone Watershed Basin supported the project. The Environmental Assessment (EA) is being distributed to all individuals and groups listed on the cover letter. The EA also will be published on Montana Fish, Wildlife and Parks webpage: fwp.mt.gov.

3. Duration of comment period?

Public comment will be accepted through 5:00 PM on March 7, 2006.

4. Person responsible for preparing the EA.

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MONTANA DEPARTMENT OF FISH, WILDLIFE AND PARKS
 1420 E 6th Ave, PO BOX 200701, Helena, MT 59620-0701
 (406) 444-2535

ENVIRONMENTAL ASSESSMENT

Project Title Yellowstone Cutthroat Entrainment Prevention Project

Division/Bureau Fisheries Division - Future Fisheries Improvement Program

Description of Project The Future Fisheries Improvement Program is proposing to provide partial funding to modify three existing irrigation systems to facilitate fish passage and prevent loss of Yellowstone cutthroat trout and other fish into the systems.

POTENTIAL IMPACT ON PHYSICAL ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Terrestrial & aquatic life and habitats			X			X
2. Water quality, quantity & distribution			X			X
3. Geology & soil quality, stability & moisture				X		
4. Vegetation cover, quantity & quality			X			X
5. Aesthetics				X		
6. Air quality				X		
7. Unique, endangered, fragile, or limited environmental resources			X			X
8. Demands on environmental resources of land, water, air & energy				X		
9. Historical & archaeological sites				X		

POTENTIAL IMPACTS ON THE HUMAN ENVIRONMENT

	MAJOR	MODERATE	MINOR	NONE	UNKNOWN	COMMENTS ON ATTACHED PAGES
1. Social structures & mores				X		
2. Cultural uniqueness & diversity				X		
3. Local & state tax base & tax revenue				X		
4. Agricultural or industrial production			X			X
5. Human health				X		
6. Quantity & distribution of community & personal income				X		
7. Access to & quality of recreational and wilderness activities				X		
8. Quantity & distribution of employment				X		
9. Distribution & density of population & housing				X		
10. Demands for government services				X		
11. Industrial & commercial activity				X		
12. Demands for energy				X		
13. Locally adopted environmental plans & goals				X		
14. Transportation networks & traffic flows				X		

Other groups or agencies contacted or which may have overlapping jurisdiction Park Conservation District, Natural Resource and Conservation Service, Upper Yellowstone Watershed Basin (Watershed Group)

Individuals or groups contributing to this EA: Patrick Byorth, FWP

Recommendation concerning preparation of EIS No EIS required.
EA prepared by: Patrick Byorth

Date: February 6, 2006

Attachment A. Map of the project sites.

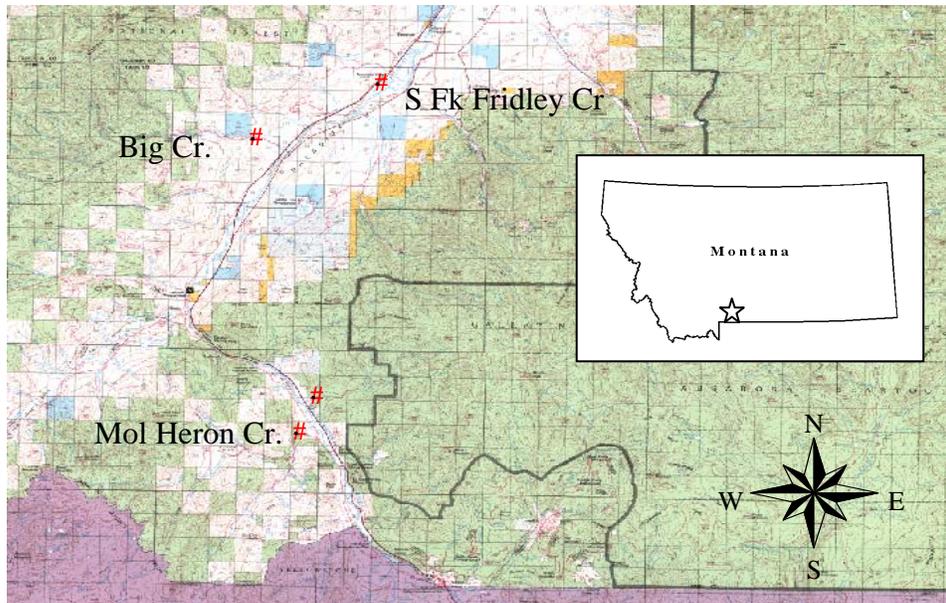
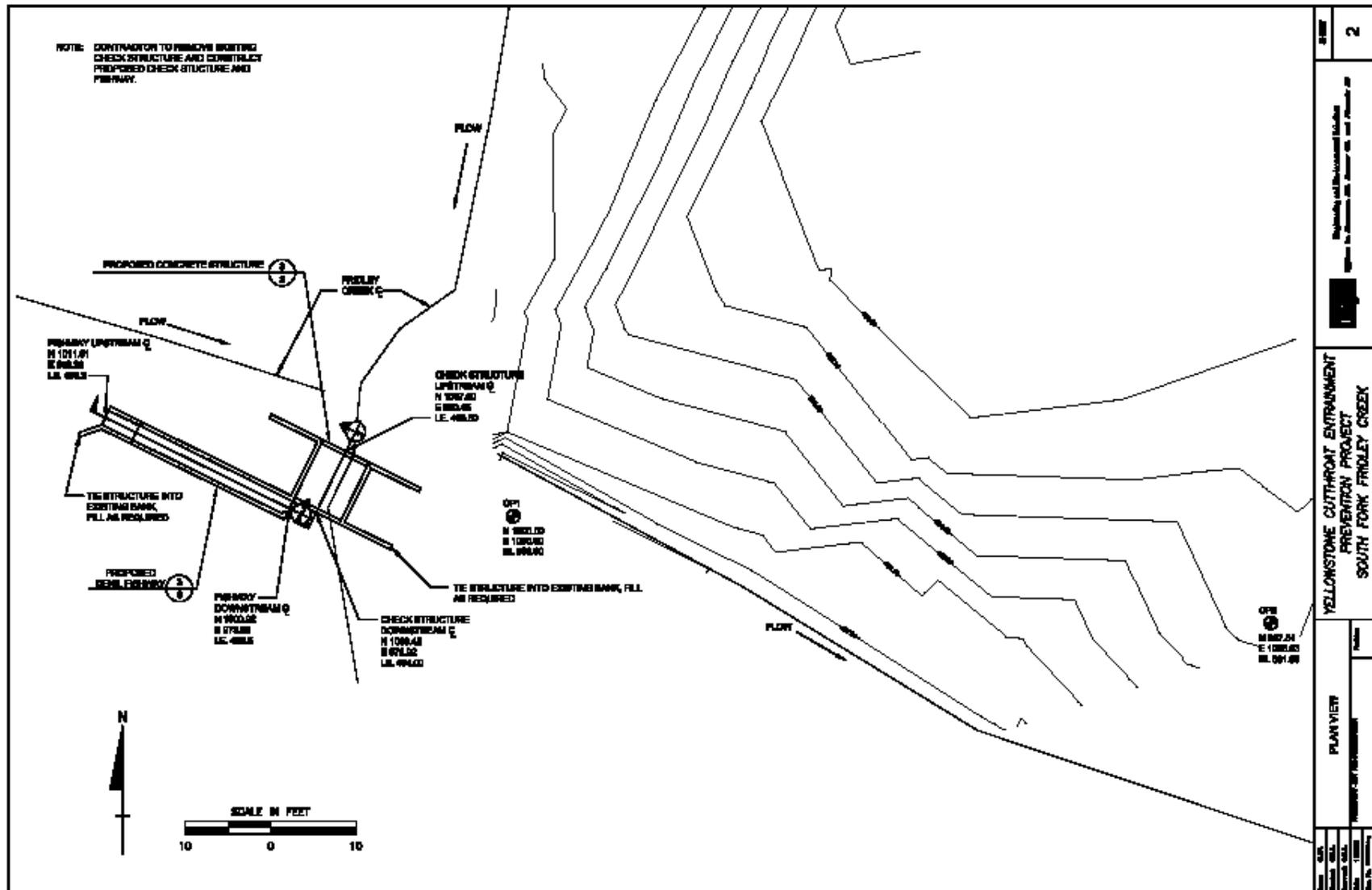


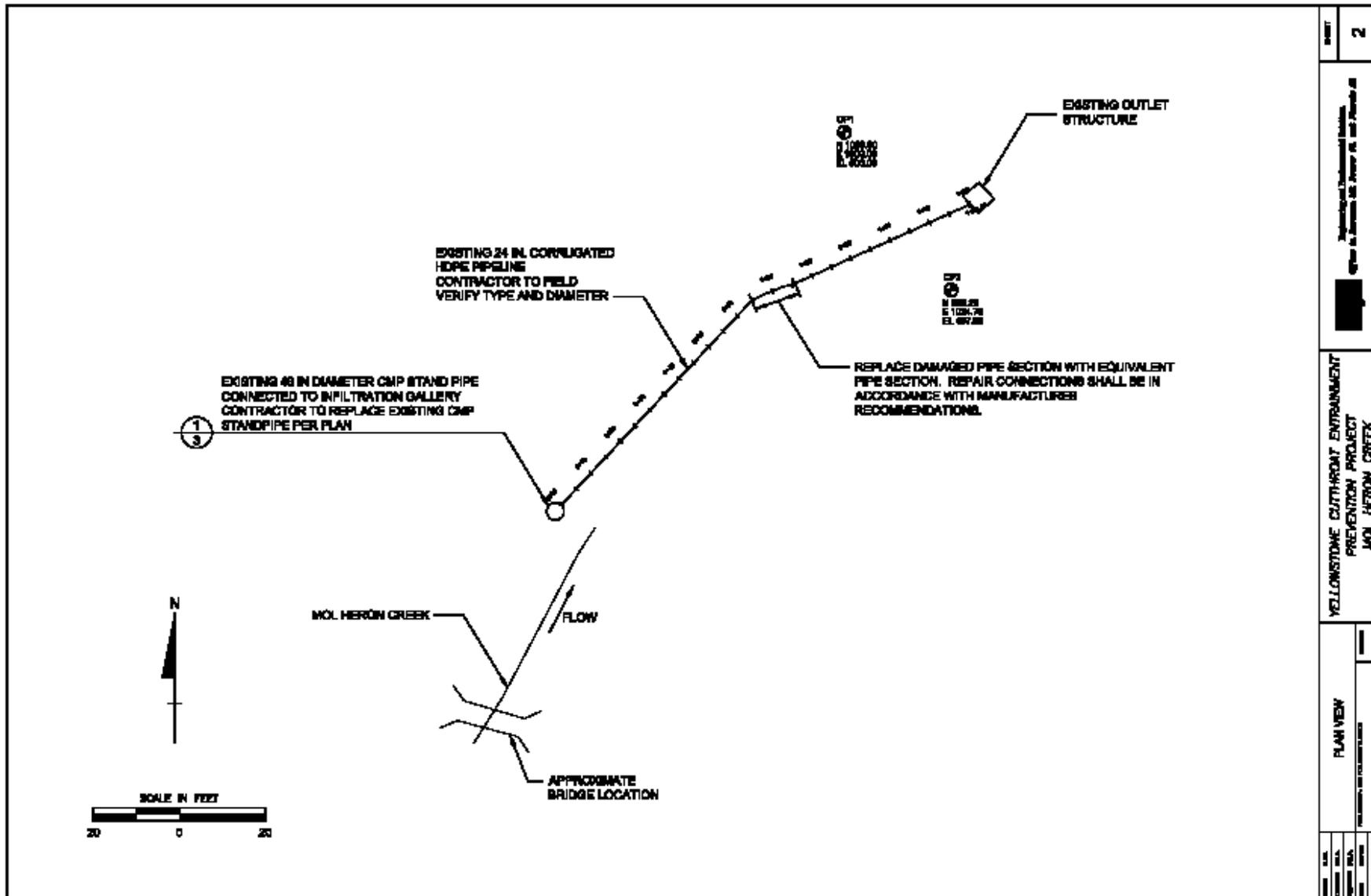
Figure 1. Proposed Sites for Entrainment Protection Project in Upper Yellowstone River Drainage, MT

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Attachment B. Plan view of South Fork Fridley project site.



Attachment D. Plan view of Mol Heron Creek project site.



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Yellowstone Culthfront Entrainment Prevention Project Mol Heron Creek		
PLAN VIEW PREPARED BY: [Redacted]		
DATE	BY	APP'D